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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/990,102	11/21/2001	Mark Akeson	UCAL-199	1289

7590

05/06/2003

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EXAMINER

LEARY, LOUISE N

ART UNIT

PAPER NUMBER

1654

DATE MAILED: 05/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/990,102

Applicant(s)

AKESON ET AL.

Examiner

Louise N. Leary

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17-20 is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 10.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

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1. Claims 1-20 are pending in this application.
2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chan (WO 98/35012).

Chan discloses a method for detecting, sequencing and characterizing duplex DNA in a sample. See page 64, lines 29-32 and pages 65-69. Also, Chang discloses methods for analyzing polymers comprising the steps of applying an electric field to a polymer solution, wherein nucleic acids were the preferred polymers passed through nanochannels. See page 19, lines 11-35; page 21, lines 12-15 and page 25, lines 29-30. Regarding the use of the word "nanopore", Chan discloses and describes a -nanochannel-. See page 25, lines 29-30 and figure 11. With respect to the instant claim 10 that describes a medium which includes a plurality of different duplex nucleic acids that differ by sequence, Chan discloses a "plurality of similar polymers" that is two or more similar polymers. Note page 74, lines 27-29. Chan discloses nucleic acid sequencing is a particularly preferred embodiment of the methods of the invention. Note page 75, line 1. With respect to the instant claim limitation, "a signature current blockade profile", Chan discloses "the polymer specific feature is information about a structural feature of a polymer". Note page 20, lines 5-6. In regards to the device described in instant claims 15-16, Chan discloses a device comprising an algorithm and a computer readable medium for data analysis.

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See pages 57-59. Thus, Chan discloses the invention claimed except for using the word "nanopore" and the phrase "a signature current blockade profile".

However, regarding the use of the word "nanopore", Chan discloses and describes a ---nanochannel--- which performs the same function as the "nanopore" and Chan discloses detecting specific feature information for the polymers analyzed described in the instant claims.

Hence, Chan discloses the invention claimed except for using the word "nanopore" and the phrase "a signature current blockade profile" but Chan addresses nanochannel--- which performs the same function as the "nanopore" and Chan discloses detecting a specific feature information for the polymers analyzed .

Therefore it would have been obvious to one having ordinary skill in this art at the time this invention was made to provide the methods and device claimed because Chan discloses the invention claimed except for using the word "nanopore" and the phrase "a signature current blockade profile" but Chan addresses nanochannel--- which performs the same function as the "nanopore" and Chan discloses detecting a specific feature information for the polymers analyzed which renders obvious the invention as claimed.

3. Claims 17-20 are allowable over the prior art of record.

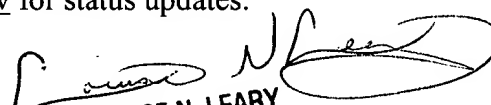
4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Louise N. Leary whose telephone number is (703) 308-3533. The examiner can normally be reached on Monday to Friday from 9:30 to 6 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brenda Brumback, can be reached on (703) 306-3220. The fax phone number for the organization where this application or proceeding is assigned is (703)308-4556.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-1235.

Please visit our website at www.uspto.gov for status updates.



LOUISE N. LEARY
PRIMARY EXAMINER

May 5, 2003